

**Remarks**

The Official Action dated August 9, 2007 has been carefully reviewed, and the present Response C addresses the issues raised in that Official Action.

**I. STATUS OF THE CLAIMS**

Claims 1-4, 6-20 and 23-27 were pending in the application.

Claims 1-4 and 6-14 are allowed.

Claims 15, 16, 18-20 and 23-26 were rejected.

Claims 17 and 27 were objected to.

Claims 15, 19, 25 and 27 are amended herein.

Claim 17 is canceled without prejudice.

Claims 1-4, 6-16, 18-20 and 23-27 remain in the application.

**II. THE CLAIM OBJECTIONS**

*Claim 17 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.*

In response thereto, the limitations of claim 17 have been incorporated into amended claim 15, the sole parent of claim 17. Claim 27 has been rewritten in independent form to incorporate the limitations of claim 25 as suggested by the Examiner. It is therefore submitted that claims 15 and 27 is allowable. It is therefore further submitted that claims 16 and 18, which depend from amended claim 15 are also allowable.

**III. THE 35 U.S.C. 103(a) REJECTIONS**

*Claims 15, 19 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mack et al. (WO 02/052608) in view of Sakai et al. (JP 02-144841).*

By this amendment, claim 15 has been rewritten to incorporate the limitations of canceled claim 17, which the Examiner had indicated was allowable. As the Examiner pointed out, claim 17 was allowable over the prior art because the prior art does not teach a vented enclosure surrounding and extending in front of the strike plate and comprising a multiplicity of electrically

conductive ring electrodes disposed with gaps between the ring electrodes wherein the multiplicity of electrically conductive ring electrodes are arranged and electrically connected in at least three groups that are independently electrically biased for minimizing undesired charged particle leakage into or out of the faraday cup and each of the at least three groups of electrically connected ring electrodes comprises two or more ring electrodes. It is therefore submitted that claim 15 is allowable over the prior art.

By this amendment, claim 19 has been rewritten to incorporate the limitations of allowed claim 9. As stated by the Examiner, claim 9 is allowable because the prior art does not teach a vented faraday cup including a plurality of substantially coaxial electrically conductive ring electrodes disposed with gaps between the ring electrodes wherein the plurality of electrically conductive ring electrodes are arranged and electrically connected in at least three groups of at least two ring electrodes, each group independently electrically biased so as to minimize undesired charged particle leakage into or out of the cup. It is therefore submitted that claim 19, as well as dependent claims 23-24, are allowable over the prior art.

Finally, by this amendment claim 25 has been amended to incorporate the limitations of allowed claim 10. Claim 10 is allowable over Mack et al. because the faraday cup including a strike plate as disclosed in Mack et al., combined with the vented faraday cup as disclosed in Sakai et al., still does not teach a surface of the strike plate including saw-tooth grooves. It is therefore submitted that claim 25, as well as dependent claim 26, are allowable over the prior art.

*Claims 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mack et al. in view of Sakai et al., and further in view of Fuzishita et al. (US 4,916,311).*

Claim 16 and 18 depend on amended claim 15, which Applicant contends is allowable due to the arguments described above. It is therefore submitted that claims 16 and 18 are allowable over the prior art.

Similarly, claim 20 depends on amended claim 19, which Applicant contends is allowable because of the arguments presented above. It is therefore submitted that claim 20 is allowable over the prior art.

IV. CONCLUSION

In view of the above amendments and remarks, it is submitted that claims 1-4, 6-16, 18-20 and 23-27 are in condition for allowance and such action is earnestly solicited.

Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 617-345-3000.

Please charge \$210 to deposit account 03-2410 for newly independent claim 27. The Commissioner is also hereby authorized to charge any additional fees due with this Response C, and to credit any overpayments, to deposit account 03-2410.

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Respectfully submitted,  
MICHAEL E. MACK, Applicant

By:

  
David W. Gomes  
Reg. No. 27,640  
Attorney for Applicant